

CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A transmitting device comprising:

~~an input for receiving to receive a plurality of data frames that represents~~
~~represent~~ sound;

~~a low pass filter for selecting to select a first group of the data that represents a~~
~~low frequency portion of the sound, where the first data group is a portion of a data~~
~~frame within the plurality of data frames;~~

~~a high pass filter for selecting to select a second group of the data that~~
~~represents a high frequency portion of the sound, where the second data group is a~~
~~portion of the data frame within the plurality of data frames; and~~

~~an encoder to encode the first data group of a first data frame and the second~~
~~data group of a second data frame into a first packet and encoding the first data group~~
~~of the second data frame and the second data group of a third data frame into a second~~
~~packet distinct from the first packet; and~~

~~a transmit buffer for transmitting to transmit to a network the first data group~~
~~in a the first packet and the second data group in a the second packet distinct from the~~
~~first packet.~~

2. (Currently Amended) The device of claim 1, ~~further comprising: where an the~~
~~encoder for encoding the first data group from the low pass filter into the first packet~~
~~and encoding the second data group from the high pass filter into the second packet~~
~~and sending sends~~ the first and second packet to the transmit buffer.

3. (Currently Amended) The device of claim 2, ~~further comprising:~~

~~a switch having a first position for directing to direct the first data group from~~
~~the low pass filter to the encoder, and a second position for directing to direct the~~
~~second data group from the high pass filter to the encoder, the encoder then~~
~~interleaving the first packet with the second packet.~~

4. (Currently Amended) The device of claim 3, ~~further comprising:~~

a delay buffer ~~for delaying to delay~~ the arrival to the switch of one of the first data group and the second data group.

5. (Currently Amended) A receiving device comprising:

a network interface for coupling to a network; and

a processor coupled with the network interface, ~~wherein~~ where the processor is adapted to

~~receive~~ receives a first packet, and a second packet and a third packet from the network,

~~extract~~ extracts a first group of data from the first packet and the second packet representing a first low frequency band of a sound signal,

~~extract~~ extracts a second group of data from the second packet and the third packet representing a second high frequency band of the sound signal distinct from the first band, and

~~combine~~ combines the first data group from the first packet with the second data group from the second packet to construct a first single data frame representing both the first high frequency band and the second low frequency band of the same sound signal, and

combines the first data group from the second packet with the second data group from the third packet to construct a second single data frame representing both the first high frequency band and the second low frequency band of the same sound signal.

6. (Canceled)

7. (Currently Amended) The device of claim 5, ~~wherein~~ where the processor is ~~further adapted to:~~

~~receive~~ receives at least one additional packet, and

~~extract~~ extracts an additional first group of data from the additional packet representing the first low frequency band.

8. (Currently Amended) The device of claim 7, ~~wherein~~ where the first data group from the first packet is identical to the additional first data group.

9. (Currently Amended) The device of claim 5, ~~wherein~~ where the processor is ~~further adapted to:~~

~~receive~~ receives abbreviated redundant data corresponding to the first data group from the first packet, and

~~expand~~ expands the received abbreviated data.

10. (Currently Amended) An article comprising: a storage medium, ~~said~~ the storage medium having stored thereon instructions, that, when executed by at least one device, result in:

arranging data ~~that~~ represents sound in a plurality of frames;

dividing the data of each of at least ~~one~~ three frame frames into a first group that represents sound within a first band of a sound bandwidth and a second group that represents sound within a second band of the sound bandwidth;

encoding the first data group of a first data frame and the second data group of a second data frame as a first packet;

encoding the first data group of the second data frame and the second data group of a third data frame as a second packet distinct from the first packet; and

transmitting the first packet and the second packet through the network.

11. (Currently Amended) The article of claim 10, ~~wherein~~

where the first band is a low-frequency band; and

where the second band is a high-frequency band.

12. (Canceled)

13. (Currently Amended) The article of claim 10, ~~wherein~~ where the instructions ~~further~~ result in:

abbreviating and transmitting redundantly the first data group through the network.

14. (Currently Amended) The article of claim 13, ~~wherein~~ where the instructions ~~further~~ result in:

abbreviating includes down-sampling the first data group.

15. (Currently Amended) An article comprising: a storage medium, ~~said~~ the storage medium having stored thereon instructions, that, when executed by at least one device, result in:

receiving three sequential frames of data that represent sound;

dividing the data of each of the three frames into a first group that represents sound within a low band of a sound bandwidth and a second group that represents sound within a high band of the sound bandwidth;

encoding the first data group of the first frame and the second data group of the second frame as a first packet;

encoding the first data group of the second frame and the second data group of the third frame as a second packet; and

transmitting the first and second packets through the network.

16. (Currently Amended) The article of claim 15, ~~wherein~~ where the instructions ~~further~~ result in:

abbreviating and transmitting redundantly at least one of the first data group and the second data group through the network.

17. (Currently Amended) An article comprising: a storage medium, ~~said~~ the storage medium having stored thereon instructions, that, when executed by at least one device, result in:

receiving a first packet, ~~and~~ a second packet and a third packet from the network,

extracting a first group of data from the first packet and the second packet representing a first low frequency band of a sound signal,

extracting a second group of data from the second packet and the third packet representing a second high frequency band of the sound signal distinct from the first band, ~~and~~

combining the first data group from the first packet with the second data group from the second packet to construct a first single data frame representing both the first high frequency band and the second low frequency band of the same sound signal, and

combining the first data group from the second packet with the second data group from the third packet to construct a second single data frame representing both

the first high frequency band and the second low frequency band of the same sound signal.

18. (Currently Amended) An article comprising: a storage medium, ~~said~~ the storage medium having stored thereon instructions, that, when executed by at least one device, result in:

inferring a first group of data representing sound belonging in a first low band of a sound bandwidth;

receiving a packet from a network;

extracting a second group of data from the packet representing sound belonging in a second high band of the sound bandwidth distinct from the first band; and

combining the first data group with the second data group to construct a single frame with data representing sound in both the first band and the second band.

19. (Currently Amended) The article of claim 18, ~~wherein~~ where the instructions ~~further~~ result in:

receiving at least one additional packet; and

extracting an additional first group of data from the additional packet representing sound belonging in the first low band,

~~wherein~~ where the first data group is inferred from the additional first data group.

20. (Currently Amended) The article of claim 18, ~~wherein~~ where the first data group is identical to the additional data group.

21. (Currently Amended) The article of claim 18, ~~wherein~~ where the instructions ~~further~~ result in:

receiving abbreviated redundant data corresponding to the first data group; and expanding the received abbreviated data.

22. (Currently Amended) A method comprising:

arranging data that represents sound in a plurality of frames;

dividing the data of each of at least ~~one~~ three frame frames into a first group that represents sound within a first band of a sound bandwidth and a second group that represents sound within a second band of the sound bandwidth;

encoding the first data group of a first data frame and the second data group of a second data frame as a first packet;

encoding the first data group of the second data frame and the second data group of a third data frame as a second packet distinct from the first packet; and transmitting the first packet and the second packet through the network.

23. (Currently Amended) The method of claim 22, ~~wherein~~
where the first band is a low-frequency band, and
where the second band is a high-frequency band.

24. (Canceled)

25. (Currently Amended) The method of claim 22, ~~further~~ comprising:
abbreviating and transmitting redundantly the first data group through the network.

26. (Currently Amended) The method of claim 25, ~~wherein~~ where abbreviating includes down-sampling the first data group.

27. (Original) A method comprising:
receiving three sequential frames of data that represent sound;
dividing the data of each of the three frames into a first group that represents sound within a low band of a sound bandwidth and a second group that represents sound within a high band of the sound bandwidth;
encoding the first data group of the first frame and the second data group of the second frame as a first packet;
encoding the first data group of the second frame and the second data group of the third frame as a second packet; and
transmitting the first and second packets through the network.

28. (Currently Amended) The method of claim 27, ~~further~~ comprising:

abbreviating and transmitting redundantly at least one of the first data group and the second data group through the network.

29. (Currently Amended) The method of claim 28, ~~wherein~~ where abbreviating includes down-sampling.

30. (Currently Amended) The method of claim 28, ~~wherein~~ where abbreviating includes determining a complementary band information synthesis shift between one of the first data group and one of the second data group.

31. (Currently Amended) A method comprising:

receiving a first packet, ~~and~~ a second packet and a third packet from the network,

extracting a first group of data from the first packet and the second packet representing a first low frequency band of a sound signal,

extracting a second group of data from the second packet and the third packet representing a second high frequency band of the sound signal distinct from the first band, ~~and~~

combining the first data group from the first packet with the second data group from the second packet to construct a first single data frame representing both the first high frequency band and the second low frequency band of the same sound signal, and

combining the first data group from the second packet with the second data group from the third packet to construct a second single data frame representing both the first high frequency band and the second low frequency band of the same sound signal.

32. (Currently Amended) A method comprising:

inferring a first group of data representing sound belonging in a first low band of a sound bandwidth;

receiving a packet from a network;

extracting a second group of data from the packet representing sound belonging in a second high band of the sound bandwidth distinct from the first band; and

combining the first data group with the second data group to construct a single frame with data representing sound in both the first band and the second band.

33. (Currently Amended) The method of claim 32, ~~further~~ comprising:

receiving at least one additional packet; and

extracting an additional first group of data from the additional packet representing sound belonging in the first low band,

~~wherein~~ where the first data group is inferred from the additional first data group.

34. (Currently Amended) The method of claim 32, ~~wherein~~ where the first data group is identical to the additional data group.

35. (Currently Amended) The method of claim 32, ~~wherein~~ where the first data group is determined from a weighted average that includes the additional data group.

36. (Currently Amended) The method of claim 32, ~~wherein~~ where inferring is performed by:

receiving abbreviated redundant data corresponding to the first data group; and
expanding the received abbreviated data.

37. (Currently Amended) The method of claim 36, ~~wherein~~ where expanding includes

up-sampling the abbreviated data.

38. (Currently Amended) The method of claim 32, ~~wherein~~ where inferring includes using a complementary band information synthesis shift to infer data in the first low band from data in the second high band.

39. (Currently Amended) The method of claim 38, ~~further~~ comprising:

receiving and decoding the complementary band information synthesis shift.

40. (Currently Amended) The method of claim 38, ~~further~~ comprising:

determining the complementary band information synthesis shift from at least one other received first data group and at least one received second data group.

41. (Currently Amended) A transmitting device comprising:

input means for receiving a plurality of data frames that represents sound;

low pass filter means for selecting a first group of the data that represents sound within a low portion of a sound bandwidth, where the first data group is a portion of a data frame within the plurality of data frames;

high pass filter means for selecting a second group of the data that represents sound within a high portion of the sound bandwidth, where the second data group is a portion of the data frame within the plurality of data frames; and

encoder means for encoding the first data group of a first data frame and the second data group of a second data frame into a first packet and encoding the first data group of the second data frame and the second data group of a third data frame into a second packet distinct from the first packet; and

transmit buffer means for transmitting to a network ~~the first data group in a first packet and the second data group in a second packet distinct from the first packet.~~

42. (Canceled)

43. (Currently Amended) The device of claim 41, ~~further~~ comprising:

switch means having

a first position for the transmit buffer means to receive the first data group from the low pass filter, and

a second position for the transmit buffer means to receive the second data group from the high pass filter.

44. (Currently Amended) The device of claim 43, ~~further~~ comprising:

delay buffer means for delaying the arrival to the switch of one of the first data group and the second data group.

Please add the following new claims.

45. (Added) The device of claim 7, where the first data group from the second packet is identical to the additional first data group.

46. (Added) The device of claim 5, where the processor
receives abbreviated redundant data corresponding to the first data group from
the second packet, and
expands the received abbreviated data.

RESPONSE TO
OFFICE ACTION

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